Draft Environmental Assessment

Eagle Boat Landing Replacement and Relocation

City of Eagle, Alaska
FEMA-1843-DR-AK

June 2011

FEMA

U.S. Department of Homeland Security
FEMA Region X
130 228th Street SW
Bothell, WA 98021-9796

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FEMA Public Assistance Program
FEMA-1843-DR-AK
FEMA Project Worksheet No. 89

Prepared for:

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LIST OF ACRONYMS

ACMP	Alaska Coastal Management Program
ADNR	Alaska Department of Natural Resources
AFSC	Alaska Fisheries Science Center
APE	Area of Potential Effects
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
cy	cubic yards
DCOM	Division of Coastal and Ocean Management
DEQ	Department of Environmental Quality
EA	Environmental Assessment
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NR	National Register
NRHP	National Register of Historic Places
OHWM	Ordinary High Water Mark
SHPO	State Historic Preservation Office/Officer
UAF	University of Alaska Fairbanks
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

The City of Eagle (City) has applied through the Alaska Department of Homeland Security and Emergency Management to the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) for funding to construct a boat landing in Eagle, Alaska. The landing would replace the City's boat landing destroyed during flooding and ice jams that occurred on the Yukon River from April 28 through May 31, 2009. The event was declared a Presidential disaster on June 11, 2009 (FEMA-1843-DR-AK). FEMA is proposing to fund 75 percent of the cost for this project through its Public Assistance Program and the State of Alaska is proposing to fund the remaining 25 percent.

1.1 Authority and Jurisdiction

The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1973 (Stafford Act), as amended, provides federal assistance programs for both public and private losses sustained in disasters. In accordance with the National Environmental Policy Act (NEPA) of 1969, FEMA must evaluate the environmental consequences of proposed actions on the natural and human environment before deciding to fund an action, including evaluating alternative means of addressing the purpose and need for a federal action. The President's Council on Environmental Quality (CEQ) has developed a series of regulations for implementing NEPA. These regulations are included in Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508. This draft Environmental Assessment (EA) will address the environmental issues associated with the construction of the proposed boat landing. It is prepared in accordance with both CEQ and FEMA regulations for NEPA (44 CFR Part 10) to determine whether to prepare a Finding of No Significant Impact or a Notice of Intent to prepare an Environmental Impact Statement for the proposed project.

2.0 PURPOSE AND NEED

The purpose of the Stafford Act is to provide a wide range of federal assistance for states and local governments significantly impacted by disasters or emergencies or both. The purpose of FEMA's Public Assistance grant program is to provide assistance to state, tribal, and local governments, and certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.

FEMA determined there is a need for restoring a functional, safe, reliable, and effective boat landing for the residents of the community to replace the one that was lost during the disaster event. Residents of Eagle have a close dependence on the Yukon River for food, transportation, and gathering material for the subsistence lifestyle predominate in the area. The community determined there is a need to move the landing to a new site to avoid continued problems that have occurred every year at the existing site due to silt deposition during spring runoff and the breakup of the river ice. In addition, changes to the shoreline topography that occurred to the existing site during the disaster event make the site even less desirable due to bank erosion.

3.0 LOCATION AND BACKGROUND

3.1 Location

The community of Eagle includes both the City and the Native Village of Eagle (Village). The City is six miles west of the Alaskan-Canadian border on the left bank of the Yukon River at the mouth of Mission Creek. It marks the end of the Taylor Highway which begins approximately 160 miles south at the intersection with the Alaska Highway (State Route 2) at Tetlin Junction, located a few miles east of Tok Junction. For many years the Village was located on the left bank of the Yukon River three miles east of the City. When the Village was destroyed during the flooding and ice jams that occurred in May 2009, the remaining residents moved to an inland site already under development. The New Village site is located approximately ten miles southwest of the City and connected by Mission Road.

The City encompasses one square mile of land and is southeast of the Yukon Charley Rivers National Preserve. The original boat landing site is located approximately one mile southeast of the City on the edge of the Yukon River where Elizabeth Street ends. The site is located in Township 1 South, Range 33 East, Section 32 of the Fairbanks Meridian at Latitude 64.78149^{o} North, Longitude -141.16161^{o} West. Figure 1 below shows the location of the project area.

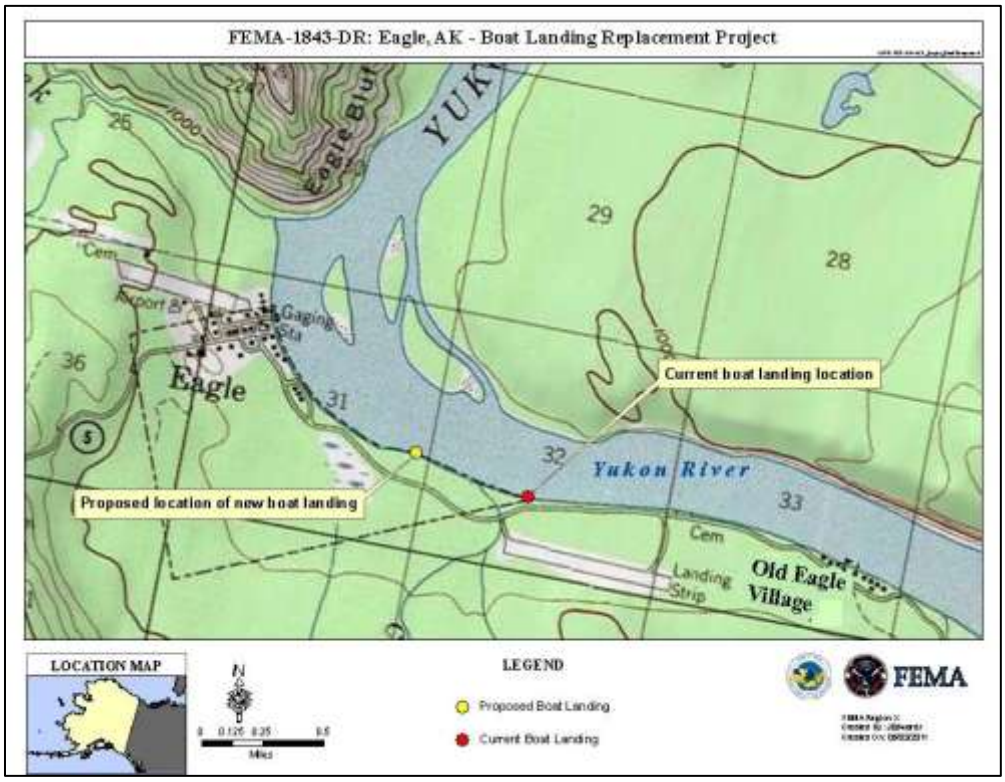

Figure 1. Site Location Map

3.2 Background

The population of the City was listed as 86 and the Village as 67 in 2010 (U.S. Census). Access to the state road system and Canada is only available during the summer via the Taylor Highway. A state-owned 3,600' long by 75' wide gravel airstrip is available, with commercial flights originating from Fairbanks and Tok. The Yukon River serves as summer waterway for boats and as a frozen winter highway. In addition to boats, float planes are able to land on the river during the summer. There is no public dock and the boat landing (until destroyed) was the only public facility along the river. The Holland America Line offers *Yukon Queen II* river cruises between Dawson City, Yukon, and Eagle (102 miles) during the summer and sets up their own private temporary dock for the 100' long by 32' wide catamaran.

Beginning in British Columbia, the Yukon River is 1,980 miles long, the third longest in North America, and flows through thick forests, tundra, and mountain ranges before emptying into the Bering Sea. In the Athabascan language of Gwich'in, Yukon means "great river" speaking to the sheer scale and importance of it. The Athabascan people of interior Alaska have fished from and lived along the Yukon River for millennium, making it an integral part of subsistence in Alaska. Historically the Yukon River has played an important role in the fur trade and gold rush of the mid and late nineteenth century, serving as a principle means of transportation. The river continued to do so until the 1950s, when roads and airstrips began replacing barges as the most convenient method of transportation for people living and working along the river.

Residents of the community of Eagle have a very strong and close dependence on the Yukon River for food, transportation, and gathering material for the subsistence lifestyle predominate in the area. Access to the river is vital during the short summer season.

4.0 ALTERNATIVES

In accordance with federal laws and FEMA regulations, the EA process for a proposed federal action must include an evaluation of alternatives and a discussion of the potential environmental consequences. This draft EA includes the analysis of three alternatives. Alternative 1 is the No Action Alternative, which would entail no repairs or improvements to the boat landing destroyed in May 2009. Alternative 2 would rebuild the boat landing to its pre-disaster condition at its original site. Alternative 3 would build a new boat landing at an alternative site and is the Proposed Action Alternative.

No other alternatives were considered for the relocation of the boat landing as the site chosen is on land owned by the City and provides a suitable location in close proximity to the City.

4.1 Alternative 1 – No Action Alternative

Inclusion of a No Action Alternative in the environmental analysis and documentation is required under NEPA. The alternative evaluates the effects of not providing eligible assistance for a specific action and provides a benchmark against which the other alternatives may be evaluated.

Figure 2. Aerial Map of Boat Landing Sites (Google imagery; 7/20/2006)

Under the No Action Alternative, FEMA would not provide funding to restore the boat landing for the City. Existing conditions would continue to deteriorate and the citizens of the community of Eagle would not have a designated place to land and launch their boats safely. Current and ongoing activities to use makeshift sites along the river would continue. This alternative would not meet the project's purpose and need, nor the City's goals and objectives identified.

4.2 Alternative 2 – Rebuild Boat Landing at Original Site

Under Alternative 2, the City would contract to have the boat landing rebuilt at its original site. During October 2010, the approach from Elizabeth Street to the river bed's edge dropped approximately 8 feet where the former landing was located due to bank erosion and backfilling from the flooding and ice flows that occurred during the disaster event. There was a total vertical differential of 15 feet to access the Yukon River. The river bed at this site is composed of primarily soft silt and extends approximately 200 yards out from the landing location at an almost flat grade until it reaches deeper water.

The City would excavate 430.5 cubic yards (cy) of material to construct a boat ramp 90 feet long x 16 feet wide perpendicular to the river. This would be followed by placing and grading

Photo 1. Original boat landing site (10/5/10).

Photo 2. View to river from original site (10/5/10).

approximately 228.5 cy of D1 surface aggregate material at the site and spreading the gravel to the river's edge using a D-6 dozer. The gravel would be provided from a nearby Alaska Department of Transportation permitted quarry.

4.3 Alternative 3 – Build Boat Landing at Alternative Site (Proposed Action)

For the Proposed Action, the City would install a new boat landing approximately 906 yards (.51 miles) downriver from the original landing at a site closer to the City. The landing would include a concrete boat ramp that would provide river access at low water levels after spring ice breakup and during the fall until the river freezes up. The site is located where the river current keeps silt deposition to a minimum. The proposed site is currently used by the community for river access, to park their boats, and to cut and hang fish. It provides a good location in terms of the grade adjacent to the shoreline and has wind to reduce the smells associated with hanging fish. The shoreline and river bottom consist of heavy compacted cobble, which provides an excellent stable base foundation. The site is currently accessed via a dirt road and the topography of the shoreline would not require much ground work. Excavation would only be needed for the placement of the boat ramp well below high water.

The project would place two 40' long x 7'-10" wide x 30” high precast concrete bridge spans weighing approximately 40,000 pounds end to end, providing an 80' long hard surface boat ramp. The beginning of the ramp would be placed approximately 120’ waterward from the ordinary high water of the river during the fall of 2011 when the site is exposed due to low water. A 24"-30" trench for embedding the concrete bridge boat ramp would be excavated at an angle approximately 45 degrees downstream and partially into the river’s edge at low water. The existing river bank grade at the site is 10-12^{o} and the finished top surface of the ramp would be 6” above the grade.

Approximately 105 cubic yards of base course aggregate would be placed and spread along an approach currently used by the community for river access to connect to the boat ramp. The approach would be 120' long x 12' wide x 6-8" high and would include a 60’ diameter cul de sac

Photo 3. Existing road access to new landing site (10/5/10).

Photo 4. Boat ramp location (10/5/10).

(apron) connecting to the beginning of the concrete ramp. The materials from the minimal excavation required for the boat ramp would be suitable for use as a base surface for the apron and road access to the landing, thereby reducing the cost of bringing in material from other areas. No excavation would be required to construct the road and cul de sac. No further work is necessary or proposed at the original boat ramp location.

The new location would provide access to the river during low water and would provide a stable, permanent landing. The ramp would be underwater during the high water summer months, during which an alternate site along the river approximately 200 yards downstream from the site would be used.

5.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

The NEPA compliance process requires federal agencies to consider direct and indirect impacts to the environment. For each resource category, the impact analysis follows the same general approach in terms of impact findings. When possible, quantitative information is provided to establish impacts. Qualitatively, these impacts will be measured as outlined in Table 1.

Impacts are disclosed based on the amount of change or loss to the resource from the baseline conditions and may be direct or indirect. Direct impacts are caused by an action and occur at the same time and place as the action. Indirect impacts are caused by an action and occur later in time or are farther removed from the area, but are reasonably foreseeable. Cumulative impacts are discussed in Section 6.0.

Resources that were not analyzed in detail include air quality, noise, traffic, and hazardous materials. No effect to air quality is expected beyond small amounts of dust and exhaust from short-term construction operations. No impacts are anticipated from noise or traffic beyond short-term increased noise and traffic during construction, as the sites are located in an area that is already used by residents to access the river and to use the shoreline to cut and hang fish. No

Impact Scale	Criteria
None/Negligible	The resource area would not be affected, or changes would be either non-detectable or if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.
Minor	Changes to the resource would be measurable, although the changes would be small and localized. Impacts would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.
Moderate	Changes to the resource would be measurable and have both localized and regional scale impacts. Impacts would be within or below regulatory standards, but historical conditions are being altered on a short-term basis. Mitigation measures would be necessary and the measures would reduce any potential adverse effects.
Major	Changes would be readily measurable and would have substantial consequences on a local and regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, though long-term changes to the resource would be expected.

Table 1. Impact Analysis

potential hazardous materials were identified in or near the vicinity of the project. These resources are not analyzed further in this document.

The following subsections discuss the regulatory settings and the environment and existing conditions for each alternative. The discussion is broad and regional in nature. It does not include a complete inventory of each resource, but does provide information to characterize those resources. This section also identifies the potential effects and environmental consequences of the three alternatives considered.

5.1 Physical Resources

Eagle lies in the vast Alaskan interior and occurs within the even larger subarctic zone. The land surrounding Eagle includes major mountain ranges and the Yukon River valley. The uplands that surround the City include the Crazy and White mountains, with the Ogilvie mountains north of the City across the Yukon River. The mountains are characterized by rounded ridges with gentle side slopes, broad undulating (wavy) divides, and flat-topped spurs. The ridges have no preferred direction and are generally 3,000 to 5,000 feet in altitude. Some have domes as high as 6,800 feet and rise 1,500 to 3,000 feet above adjacent valleys. There are no glaciers and the entire section is underlain by discontinuous permafrost. The topography of the riverfront between the City and Old Village is relatively flat.

5.1.1 Climate and Climate Change

Eagle is located within a climatic region that experiences seasonal temperature extremes. The climate features long and exceptionally cold winters, relatively warm short summers, and low annual precipitation. January temperatures average -22 to -2 °F, but can range as low as -60 °F.

July temperatures average 50 to 72 °F. The Yukon River freezes to an average depth of 52" in interior Alaska, with freeze-up generally occurring in mid-November and breakup in mid-May. Most of the precipitation falls as snow in the winter (another name for the area translates as "cold snow forest"), with an average annual precipitation of 11.3 inches. Ice fog occurs during long cold spells. Mountains to the north and south tend to block moderating oceanic air masses, resulting in frequent lightning occurrences during the summer months. While the climate is dry, low evaporation and transpiration rates result in a general surplus of surface water.

The CEQ has released guidance on how federal agencies should consider climate change in their decision making process for actions. The suggested threshold for when quantitative analysis should be done in NEPA documents is for an action to release over 25,000 metric tons of greenhouse gases per year (CEQ 2010). Given the nature and small scale of the two action alternatives considered and their lack of greenhouse gas releases, no further analysis was completed on climate change because it would not meet the established threshold warranting further consideration.

5.1.2 Geology and Soils

The sequence of rocks along the Yukon River demonstrates a relatively intact record of the geologic events over a 600 million year time span. The erosional power of the Yukon River exposes older formations along with depositing new sediments along its course. Soils in the area are primarily comprised of folded and faulted layers of shale, sandstone, mudstone, and conglomerate. Eagle Bluff is the rust colored cliff dominating the skyline northwest of town and is composed mainly of greenstone. The rusty color results from oxidation of iron in the greenstone. Thick veins of quartz cut through the bluff.

This region was not glaciated during the later stages of the Pleistocene (1.8 million to 11,477 years ago, +/- 85 years; also known as the ice age). This is evident in the well-developed drainage patterns and soils that occur. The geology in the area is a belt of highly deformed Paleozoic sedimentary and volcanic rocks (251 to 542 million years ago) containing conspicuous limestone units which extend along the north side of the uplands. The rest of the uplands are chiefly Precambrian (the earth's history up to 542 million years ago). A thick mantle of windborne silt lies on the lower slopes of hills and thick accumulations of muck overlie deep stream gravels in the valleys.

5.1.3 Consequences of Alternatives

Alternative 1 – No Action

Under this alternative, FEMA would not provide funding to rebuild the boat landing. No construction activities would occur that would potentially impact physical resources and the existing site would continue to return to a natural state. The impact intensity would be negligible.

Alternative 2 – Rebuild Boat Landing at Original Site

Existing topography and soil conditions at the original location are relatively flat leading to the river bank that was eroded by the disaster. The site would be filled and leveled to a sloping grade to allow boat access. All vehicles would use the existing road infrastructure to access the site. Any required vegetation removal would be of vegetation that has grown at the site since the landing was destroyed. Best management practices (BMPs) would be required for sediment and erosion control and site work would be conducted during low water and would not involve in-water work. Based on the relatively small scale of the project and the level of erosion that has already occurred at the site, the impact intensity from the ground disturbing activities would be minor.

Direct, indirect, and cumulative effects to soil productivity and fertility would be at or below the level of detection when based on the previous use of the site and effects would be slight with no long-term effects. Soil stability would increase and infiltration capacity would decrease at the site by actions to reconstruct and stabilize the landing. Nonetheless, the site would remain vulnerable to erosion and to silt deposition during future flooding events. Mitigation measures to offset the adverse effects would be required to reduce the impacts, but long-term changes to the topography would be expected due to the location of the site.

Alternative 3 – Build Boat Landing at Alternative Site (Proposed Action)

Construction at the new site would involve excavation to install the boat ramp approximately 120' waterward of the ordinary high water of the river. This would include changes to the topography of the river bed as the top surface of the ramp would extend 6" above the existing grade of 10-12^{o}. The remaining changes to topography would involve the placement of 6-8" of base course aggregate along the approach to the boat ramp, but would not involve excavation. The new location would not have soft silt deposition problems associated with the original site and the ramp would be underwater during the high water summer months. By maintaining the existing grade level at the new site as planned, the site would not catch debris or trap ice. Changes to the site would be small and localized. Direct and indirect effects to physical resources at the site would be minor. Best Management Practices (BMPs) required in Section 8.0 would ensure adequate measures are applied before, during, and after construction to stabilize soils.

5.2 Water Resources

5.2.1 Surface, Ground, and Water Quality

The Yukon River has had a history of pollution from gold mining, military installations, dumps, wastewater, and other sources. However, the Environmental Protection Agency does not list the Yukon River among its impaired watersheds. Water quality data from the U.S. Geological Survey (USGS) shows relatively good levels of turbidity, metals, and dissolved oxygen. Riverine systems are generally bounded on the landward side by uplands, by the channel bank (including natural and man-made levees), or by wetlands.

The Yukon River at Eagle has a fixed-site stream gage (USGS 15356000, Hydrologic Unit Code 19040401) operated by the USGS since 1950 and the USGS has water quality data dating back to that time period. For a five-year USGS study concluded in 2004, discharge at the Eagle stream gage was reported as 198 meters per second (m^3/s) in June and 2,393 m^3/s in September (USGS Open-File Report 2007-1197).

Projects funded by FEMA must comply with permit requirements for the U.S. Army Corps of Engineers (USACE) under the Clean Water Act (CWA) of 1972 and Section 10 of the River and Harbors Act of 1899. This includes any project that involves the excavation or the placement of fill material into waters of the United States, particularly when work will be conducted below the ordinary high water mark (OHWM) of a water body or in a wetland. Regulations also require that any fill material used is obtained from a permitted borrow location or approved upland source, unless otherwise authorized by the USACE.

5.2.2 Wetlands

Executive Order (EO) 11990 for the Protection of Wetlands requires federal agencies to follow avoidance, mitigation, and preservation procedures with public input before implementing construction that has the potential to affect wetlands.

Wetlands landward of the Yukon River are dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. The U.S. Fish and Wildlife Service (USFWS) has conducted extensive wetlands mapping in the vicinity. The wetland inventory maps on the USFWS online wetlands mapper show freshwater forested/shrub wetlands inland of the both the original and proposed sites for the boat landing. There is an adequate buffer between the sites to ensure no wetlands would be affected. A site visit conducted by FEMA Environmental and Historic Preservation staff on October 5, 2010, confirmed that no wetlands would be impacted by the project at the original location or the Proposed Action site, and the sites are not near any streams. Streams and wetlands will not be analyzed further in this document.

5.2.3 Floodplains

EO 11988 for Floodplain Management requires federal agencies to take action to minimize the occupancy and modification of floodplains and to avoid adverse effects and incompatible development in the floodplain.

FEMA is required to notify the public at the earliest possible time of the intent to carry out an action in a floodplain and to involve the affected and interested public in the decision-making process. The initial public notice for the FEMA disaster declaration was published in both the *Anchorage Daily News* and *Fairbanks Newsminer* on June 24, 2009. The notice was also posted in the City of Eagle on the community bulletin board at the school on June 22, 2009. The public notice for this disaster and public review of the draft EA meet FEMA's public notice and review obligations.

The community of Eagle does not participate in the National Flood Insurance Program and the area is not mapped for floodplains. To determine whether the sites included in this review are

located in a floodplain, FEMA used Hazards U.S. Multi-Hazard (HAZUS-MH) mapping produced for the FEMA Hazard Mitigation Program for this disaster. The mapping delineated 100-year and 500-year base flood advisory setback lines to be used for planning purposes and provided pre- and post-disaster aerial imagery. Benchmarks were surveyed into the elevation model to correct for ground truth and accuracy. The ice jam intrusion was mapped using heads–up digitizing and became the basis of the ice extent line.

HAZUS-MH mapping was developed by FEMA in 1992 as a risk assessment software program for analyzing potential losses from floods, hurricane winds, and earthquakes. It uses current scientific and engineering knowledge coupled with the latest geographic information systems (GIS) technology to produce estimates of hazard-related damage before, or after, a disaster. For the community of Eagle, HAZUS-MH mapping used the best data available from the USGS and USACE. FEMA also purchased .5-foot orthomosaic mapping provided by Aero-Metric, Inc., from flyovers the company had conducted in the area immediately following the disaster.

Normally floodplain mapping involves a more complex process requiring flood studies, engineering, map production, and quality control. This process can take a minimum of 18 months. The process used for FEMA-1843-DR-AK was less than 30 days and therefore is not a substitute for a FEMA Flood Insurance Rate Map (FIRM). At best, the mapping provided can serve as flood advisory setback lines and in no way should be considered regulatory flood line boundaries. Their value is in identifying areas of potential risk.

From the HAZUS-MH mapping, FEMA was able to determine that the alternative sites are located in what would likely be the 100-year floodplain, per 44 CFR Part 9.7(c) – *Floodplain determination*.

5.2.4 Coastal Zone

Projects in Alaska must be consistent with the Alaska Coastal Management Program (ACMP), administered by the Alaska Department of Natural Resources (ADNR), Division of Coastal and Ocean Management (DCOM). DCOM reviews projects that affect coastal resources and most inland anadromous rivers and streams are included and require a consistency determination. Consultation with the ADNR was initiated on June 2, 2010, for a separate draft EA for the U.S. Customs House in Eagle. Christine Ballard, DCOM project review assistant, determined at that time that Eagle is not within the coastal zone boundaries of Alaska and therefore a state review for consistency with the ACMP is not required for projects in Eagle.

5.2.5 Consequences of Alternatives

Alternative 1 – No Action

The No Action alternative does not include any FEMA action and no construction activities would occur that would disturb the earth surface and potentially impact water resources. Therefore, FEMA would not be required to comply with the CWA, EO 11988, or EO 11990.

However, water quality may be impacted by continued bank erosion during future flooding events, which would likely accelerate the deterioration of the site to a natural state and create minor to moderate impacts on the water quality of the Yukon River.

Alternative 2 – Rebuild Boat Landing at Original Site

A site visit conducted by FEMA Environmental and Historic Preservation staff on October 5, 2010, confirmed that no water resources other than the Yukon River would be impacted by rebuilding the boat landing at its original site. This alternative would result in ground disturbance which may result in surface water runoff during construction that could affect the water quality of the Yukon River. BMPs required by the USACE during construction under their permitting and authorization process for the CWA would ensure that any release into the river would be minimal and the effects would be minor. The action would not impair surface water flow and would be constructed to withstand expected high flows of the Yukon River to the maximum extent possible. The project would not restrict or impede the passage of normal or high flows and would not alter the course, condition, capacity, or location of open waters. The restoration and stabilization of the streambank at the site would benefit the aquatic environment.

While the site would continue to be vulnerable to flood damage, reconstruction of the boat landing would not impede natural floodplain functions or be considered incompatible development. It would not cause adverse effects or any change to pre-existing floodplain values and would not have an impact on a 100-year or 500-year floodplain.

Due to the lack of a steady grade to launch boats, most residents would wait for high water at this location to avoid getting stuck in the silt that accumulates at the site.

Alternative 3 – Build Boat Landing at Alternative Site (Proposed Action)

A site visit conducted by FEMA Environmental and Historic Preservation staff on October 5, 2010, confirmed that no water resources other than the Yukon River would be impacted by rebuilding the boat landing at the alternative site proposed. Construction activities would take place below the OHWM of the river and would have the potential to affect water quality due to the release of sediments at the site that would be moderate, but temporary. Project design and BMPs required by the USACE permitting and authorization process under the CWA would significantly reduce the potential for effects to water quality and would ensure that any release into the Yukon River would be minimal and the effects would be minor. Any dredging of navigable waters for construction of and access to the boat ramp would also need to be compliant with USACE Section 10 permitting requirements.

The Proposed Action was also analyzed by the Alaska Department of Fish and Game (ADF&G) and USFWS regarding river bottom hydraulics and affects to streamflow. The boat ramp is considered a vane structure. When vanes are constructed in streams, they redirect the flow by changing the rotational eddies normally associated with streamflow. Submerged vanes create a drag on the river's flow and turn the direction of the water in the same way that a rudder turns the direction of a boat. Vanes are typically oriented upstream 20 to 30 degrees to direct the flow towards the opposite bank, although the angle may vary to work around a curve. Vanes angled downriver direct flow back toward the bank.

For the Proposed Action the boat ramp is angled downriver and hence would direct the flow back to the bank adjacent to the boat ramp. However, since the boat ramp will be entrenched in the river bottom with only six inches extending into the water column, it was determined the ramp would not significantly affect the river bottom hydraulics or velocity profile of the Yukon River. During project implementation, the USFWS recommended the ramp be as close to the surface of the riverbed as possible to minimize the energy of the flow directed to the bank.

By maintaining the existing grade, the minor changes to the site would not catch debris or trap ice and would avoid continued problems with silt deposition at the original site. The action would not impair surface water flow or cause unreasonable obstruction to free navigation of the Yukon River and would be constructed to withstand expected high flows to the maximum extent possible. It would not restrict or impede the passage of normal or high flows. The pre-construction course, condition, capacity, and location of open waters would be maintained to the maximum extent possible to minimize the effects to the aquatic environment.

The site is situated within an area that has historically been used by the public for river access and the public will continue to access the river regardless of whether the boat landing is replaced. While the site would continue to be vulnerable to flood damage, relocation of the boat landing at this site would not impede natural floodplain functions or be considered incompatible development. FEMA has concluded the Proposed Action would not cause adverse effects or any change to pre-existing floodplain values and would not have an impact on a 100-year or 500-year floodplain.

Overall effects to water resources from the relocation activities would be minor and mitigated by the project conditions required. Impacts to biological and cultural resources are addressed in the other sections.

5.3 Biological Resources

5.3.1 Vegetation

The City is located within an upland forest ecosystem that is mostly dominated by aspen (*Populus tremuloides*) and paper birch (*Betula papyrifera*), with some black spruce (*Picea mariana*) trees. The understory primarily consists of willow (*Salix spp.*), grasses, wild rose (*Rosa spp.*), Labrador tea (*Ledum groenlandicum*), mosses (*Sphagnum spp.*), lichens, and small forbs.

EO 13112, Invasive Species, was created to prevent the introduction of invasive species and to provide for their control.

5.3.2 Fish (including Essential Fish Habitat)

The ADF&G freshwater fish inventory database for anadromous and resident fish of the Yukon River at Eagle includes Chinook [king] salmon (*Oncorhynchus tshawytscha*), chum [dog] salmon *(O. keta)*, northern pike (*Esox lucius*), arctic grayling (*Thymallus arcticus*), whitefish (*Prosopium cylindraceum, Coregonus* spp.), and burbot (*Lota lota*). In addition, a study to characterize

juvenile salmon outmigration conducted by the University of Alaska Fairbanks (UAF) at five near-shore locations of the Yukon River at Eagle from June to September 2010 found the following fish in addition to the ones listed above: longnose suckers (*Catostomus catostomus*), lamprey (*Lamptera* spp.), lake chub (*Couesius plumbeus*), slimy sculpin (*Cottus cognatus*), and inconnu (*Stenodus leucichthys*).

The UAF study found that catch rates of chum salmon smolts had two peaks, one in early June and one in early July, while Chinook salmon fry catch rates were relatively small, but consistent, through June and July. Catch rates of whitefish larvae peaked in late July and early August while juvenile arctic grayling catch peaked in early to mid-August. Preliminary analysis indicates that peaks in catch rates may be more strongly correlated with high river discharge events than species specific timing in downriver migrations.

While both nonsalmon fish species and salmon are important for Yukon communities, salmon compromises the bulk of fish harvested each year for subsistence. The Yukon River is home to one of the longest salmon runs in the world. As salmon do not eat during their spawning migration, Yukon River salmon must have great reserves of fat and energy to fuel their thousands-mile long journey. As a result Yukon River salmon are noted for their especially rich and oily meat. Salmon are primarily harvested for subsistence using gillnets and fishwheels. Regulation and management of the Yukon River drainage for subsistence salmon follows the Yukon River Drainage Subsistence Salmon Fishery Management Protocol, which provides a framework for coordinated subsistence fisheries management between the ADF&G and the federal subsistence management programs.

The Magnuson-Stevens Fishery Conservation and Management Act of 1996 (as amended) requires all federal agencies to protect fisheries habitat from being lost due to disturbance and degradation and to consult with the National Marine Fisheries Service (NMFS) when an action has the potential to adversely affect EFH.

5.3.3 Wildlife

The City is located in game management unit 20E for the ADF&G. Habitat near the City offers nesting, brood rearing, foraging, and staging habitat for numerous bird species, including the American peregrine falcon and the bald eagle. Mammals near the city limits include caribou, moose, black and brown bears, lynx, wolves, foxes, hares, mink, beavers, shrews, and muskrats. No reptiles or amphibians occur in the area. Caribou in the Eagle area are range/tundra type and would not likely be found at the alternative sites. Moose, bear, shrews, and a number of birds may wander through the area.

The Fish and Wildlife Coordination Act (FWCA) was enacted to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water. In addition to the responsibility for compliance required by the USACE under their permitting responsibility for the CWA, FEMA consulted with the ADF&G and USFWS regarding potential impacts to fish and wildlife.

5.3.4 Bald and Golden Eagles

The Bald and Golden Eagle Protection Act of 1940, as amended, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. Take includes any disturbance likely to 1) cause injury to an eagle; 2) interfere with normal breeding, feeding, or sheltering behavior; or 3) cause nest abandonment. The USFWS database did not show any nearby eagle nests near the project area. However, should an active eagle nest be observed in the project area at any time during the project, the USFWS recommended reviewing their eagle permit website and contacting their regional office for further guidance.

5.3.5 Migratory Birds

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, provides federal protection for migratory birds, their nests, eggs, and body parts from harm, sale, or other injurious actions. The MBTA includes a "no take" provision. Consultation with the USFWS is required if an action is determined to cause a potential take of migratory birds and determines measures to minimize or avoid these impacts.

The City is located in the statewide Pacific Flyway path for migratory birds and there are woodlands, shrubs, and open cover in the project vicinity. The USFWS was consulted and did not anticipate any issues regarding migratory birds but did, however, suggest following their recommended times for avoiding vegetation clearing to protect nesting migratory birds if the project involves removal of vegetation. Timing window guidelines are provided at the USFWS website at http://alaska.fws.gov/fisheries/fieldoffice/anchorage/pdf/vegetation_clearing.pdf.

5.3.6 Threatened and Endangered Species and Critical Habitat

The Endangered Species Act (ESA) of 1973 directs federal agencies to consult with the USFWS and NMFS when an action has the potential to affect any federally-listed threatened, endangered, or proposed species, or would result in the destruction or adverse modification of designated or proposed critical habitat.

According to FEMA environmental mapping and based on current ESA species lists for both the USFWS and NMFS, there are no threatened and endangered species in the vicinity of the City and the Old and New Village. The American peregrine falcon was de-listed from the USFWS endangered species list in 1999 and the bald eagle was de-listed in 2006. No further review regarding ESA species or critical habitat is required.

5.3.7 Consequences of Alternatives

Alternative 1 – No Action

Under this alternative, no construction would occur and biological resources wouldn't be impacted from associated ground disturbing activities. However, without an established boat landing community members would likely continue to establish alternative sites to launch and

land their boats with the potential to encroach on native habitat and vegetation along the river bank. Such actions would result in minor indirect impacts.

Alternative 2 – Rebuild Boat Landing at Original Site

Minimal vegetation loss would result from this alternative as the site is a disturbed area and there is little existing vegetation. Most of the vegetation that occurs at the site has grown in since the disaster event and consists of grasses and brush. Any replanting would be seeded with native vegetation and the alternative is in compliance with EO 13112 for invasive species. The project would not alter or disturb breeding or non-breeding habitat for migratory birds or affect their food fish populations, provided all environmental conditions required by FEMA are implemented.

The implementation of BMPs and compliance with permitting requirements to stabilize the landing at the river's edge would ensure the river habitat would not be affected by the construction activities. No structures would be placed in the river bed and there would be no adverse effect to EFH. The impacts to biological resources would be negligible.

Alternative 3 – Build Boat Landing at Alternative Site (Proposed Action)

Changes to vegetation and habitat at the site would be minor, with small and localized effects to a relatively minor proportion of any native plant species population. There is substantial habitat available in the surrounding area and the effect would be negligible to short or long-term natural processes sustaining wildlife populations. The project would not alter or disturb breeding or non-breeding habitat for migratory birds or affect their food fish populations, provided all environmental conditions required by FEMA are implemented. These include a provision that if an active bird nest, eggs, or nestlings are encountered during project implementation, they will be left in place and protected until the young hatch and depart.

Impacts to fish through habitat modification are also anticipated to be minor, as the changes to the river bed where the boat ramp would be placed occurs 120' waterward of the OHWM and would be totally submerged during species specific timing related to river migrations. Changes at the site would not result in changes to food sources, shelter, or the population density of fish and aquatic species and would not affect short or long-term natural processes sustaining these populations. Compliance with ADF&G and USACE permitting requirements would ensure there will be no adverse effects to EFH. Mitigation measures required in Section 8.0 would ensure that construction activities would not adversely affect the riparian resources beyond short-term impacts. Long-term impacts to biological resources are expected to be negligible.

5.4 Cultural Resources

The National Historic Preservation Act (NHPA) requires federally-funded actions to protect cultural resources in and around a project site, in cooperation with the state, tribes, and local governments. Section 106 of the NHPA and its implementing regulations (36 CFR 800) outline the procedures to be followed in the documentation, evaluation, and mitigation of impacts to cultural resources. The State Historic Preservation Officer (SHPO) is responsible for

administering state-level programs. Cultural resources include resources of historical and/or archaeological significance. For purposes of this analysis, the term "archaeological resources" is used to refer to prehistoric or historic subsurface sites or objects, and the term "historic resources" is used to refer to above-ground historic structures and sites.

5.4.1 Prehistoric Context (American Indian/Religious Sites/Tribal Interests)

The general area where the community of Eagle is located has been the historical home to Han Kutchin (Gwich'in) Indians, a traditional Athabascan community. Although there were originally four Han settlements on the Yukon River in the late 19th century, "Johnny's Village", or "Katshikotin", is the only remaining permanent settlement. The Han village at the Eagle townsite relocated to a site three miles east of Eagle referred to as the Old Village after non-native miners began settling in the area. It is now known as the Native Village of Eagle and is a federally-recognized tribe.

In recent years, the Village had been in the process of relocating due to flood hazards, erosion, and poor water quality at the Old Village. In 2001, the Eagle Village Council selected a site and obtained land to start a New Village located inland and approximately 10 miles southwest of the City, connected by Mission Road. When the Old Village was destroyed during the flooding and ice jams that occurred in May 2009, the remaining residents at the site moved inland to the New Village. The New Village includes homes as well as the local clinic and village public safety officer's office.

5.4.2 Historic Context

In addition to the tribal history, a supply and trading station for miners working the upper Yukon and its tributaries was established in Eagle around 1874. In 1897, the City was founded and named after nesting eagles on nearby Eagle Bluff. By 1898 the population had grown to over 1,700. A U.S. Army camp was established in 1899, and Fort Egbert was completed in 1900. Eagle became the first incorporated city in the Interior in January 1901. By 1910, Fairbanks and Nome gold prospects had lured away many and the City's population declined to 178. Fort Egbert was abandoned in 1911.

5.4.3 Historic Properties

FEMA database files of the Alaska Heritage Resources Survey (AHRS) disclosed no known archaeological, historical, or paleontological sites within the area of potential effects (APE). However, one listed site is located less than ½ mile distant to the east of the original boat landing. This is Site EAG-139 Niibeeo Zhoo (Nibaww Zhoh), located on the south bank of the Yukon River to the west of the Old Village. The site represents a Han Athabascan village that was occupied between 1880 and 1890 AD and is located within the boundaries of Eagle Historic District National Historic Landmark (EAG-001). Based on oral history and archaeological data from the site, it appears that the Han families there focused on hunting large and small game, especially caribou and salmon. The site includes seven or eight house pits, each about 12' x 15'. Two house pits were excavated in the summer of 1976. The present condition is good, with vegetation cover of predominately horsetail and willow. The current undertaking will have no

effect on this site.

5.4.4 Consequences of Alternatives

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to replace the boat landing and no construction activities would occur that would potentially affect cultural resources.

Alternative 2 – Rebuild Boat Landing at Original Site

Given the heavily eroded (and eroding) environment along the river at the original boat landing site, FEMA has concluded that the likelihood of encountering any unreported cultural resources is very low. The site has incurred past ground disturbance from the original construction of the boat landing and only previously disturbed ground will be affected. An inadvertent discovery clause would be required as a condition of project approval to further mitigate the potential for adverse effects to cultural resources. Concurrence from the SHPO that no historic properties would be affected would be required prior to project implementation. The impact intensity to cultural resources is expected to be negligible. However, in the event an unanticipated discovery of a potential cultural resource occurs during construction, this would elevate the level of impact. The intensity would be determined by the nature of the discovery.

Alternative 3 – Build Boat Landing at Alternative Site (Proposed Action)

The APE for the Proposed Action is a strip of land about 180' long x 15' wide and includes an apron area in the middle measuring 60' in diameter to provide a cul de sac connecting the access road to the boat ramp. The site is 5,400 square feet, or just over $1/10^{th}$ of an acre.

Based on the absence of reported cultural resources within the APE of the undertaking and given the heavily eroded (and eroding) environment along the river in this vicinity, FEMA has concluded that the likelihood of the presence of any unreported cultural resources in the APE is very low. In addition, given the extent of ground excavation will occur 120' waterward from the OHWM of the river, ground disturbances are likely to encounter primarily disturbed soils in the river bed and the project would have little potential to encounter archaeological resources. An inadvertent discovery clause will be required as a condition of project approval and FEMA believes this further mitigates the potential for adverse effects to historic properties.

Accordingly, and subject to any later unanticipated discoveries, FEMA has made a determination of "no historic properties affected" for this undertaking, as outlined in 36 CFR §800.4(d)(1). FEMA sent a letter to the SHPO requesting concurrence with their determination on May 17, 2011. The Alaska SHPO concurred with this determination on May 31, 2011 (Appendix B). FEMA also sent a letter dated May 17, 2011, to the Native Village of Eagle requesting review of this project to identify any sites of traditional cultural and religious importance. Joyce Roberts, Chief, confirmed by telephone on May 31, 2011, that the Village did not have any concerns or issues regarding the Proposed Action.

The impact intensity to cultural resources is expected to be negligible. However, in the event an unanticipated discovery of a potential cultural resource occurs during construction, this would elevate the level of impact. The intensity would be determined by the nature of the discovery. All construction would be halted until FEMA has completed consultation with the SHPO and determines appropriate measures have been taken to ensure the project is in compliance with the National Historic Preservation Act.

5.5 Socioeconomic Resources

5.5.1 Socioeconomics and Environmental Justice

EO 12898, Environmental Justice, directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations in the United States resulting from federal programs, policies, and activities. Socioeconomic and demographic data for residents in the project vicinity was reviewed to determine if a disproportionate number (defined as greater than 50 percent) of minority or low-income persons have the potential to be affected by the alternatives considered.

For the purpose of evaluating Environmental Justice effects in this draft EA, the affected environment is defined as the population of both the City and the Village of Eagle. The 2010 U.S. Census reported there were 86 people in the City, with 90.7 percent white, 8.1 percent American Indian or Alaska Native, and the remaining 1.2 percent of the local residents had multi-racial backgrounds. For 2010 there were 67 people in the Village, with 55.2 percent white, 38.8 percent American Indian or Alaska Native, 1.5 percent black, 1.5 percent Asian, and the remaining 3 percent of the local residents had multi-racial backgrounds. A 2005-2009 American Community Survey determined that 18 percent of the City population had incomes below the poverty level, compared to 55 percent for the Village.

5.5.2 Public Health and Safety

The general public health and safety for the community in Eagle relates to the ability of residents to launch and land their boats efficiently and safely. Health and safety concerns exist with respect to potential for additional bank sloughing and the accumulation of silt in the vicinity of a landing site, both of which would affect access and navigation.

5.4.4 Consequences of Alternatives

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to replace the boat landing and no construction activities would take place. This alternative would cause continued degradation at the original site from continued erosion during flood events. The site is currently blocked with a berm where public access used to occur; therefore it would not be likely to jeopardize the health and safety of the public. However, not having a functional, safe, reliable, and effective boat landing for the residents of the community to replace the one that was

lost during the disaster event would continue to affect residents of community, as they have a close dependence on the Yukon River for food, transportation, and gathering material for their subsistence lifestyle. The direct and indirect impacts to socioeconomic resources would be minor to moderate.

Alternative 2 – Rebuild Boat Landing at Original Site

Alternative 2 would restore the original site for the community to launch and land their boats. The direct result would be a social and economic beneficial impact to the community as a whole. Public health and safety would be improved by providing a boat landing for the residents of the community. However, the continuing problems with erosion and siltation at the site would likely affect the usability of the site following flood events and during low water levels, which would impact public health and safety if residents continue to use the site and become stuck in silt while trying to launch or land their boats. Alternative 2 would cause minor to moderate indirect impacts related to long-term use of the site.

Alternative 3 – Build Boat Landing at Alternative Site (Proposed Action)

The construction of the Proposed Action would provide the City and surrounding community with a functional, safe, reliable, and effective boat landing for the residents of the community to replace the one that was lost during the disaster event. The new site would avoid continued problems that have occurred every year at the original site due to silt deposition during spring runoff and the breakup of the river ice. Public health and safety would be improved by providing river access during low water levels of the Yukon River. This would have a direct beneficial effect to the general population, including low-income and minority populations in the community, as it would provide dependable boat access to carry out subsistence activities. This would provide a long-term social and economic beneficial impact to the community as a whole.

6.0 CUMULATIVE EFFECTS

Cumulative effects are those that result from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes an action. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time.

Under the No Action Alternative, adverse impacts would occur if community members were not able to access the river for subsistence fishing during low water levels. This would result in an adverse effect to those members of the community that rely on subsistence fishing. Rebuilding the landing at its original site as proposed under Alternative 2 would contribute to continued adverse cumulative impacts to the community, as historically most boaters ended up having to wait for high water to launch their boats. During medium or low water it was difficult, if not impossible, to launch boats at the site and required backing a boat out with a trailer a long way out on a flat silty area where vehicles often became stuck.

The Proposed Action is not expected to have adverse cumulative impacts to physical resources, water resources, biological resources, cultural resources, or socioeconomic resources, as no

project impacts are anticipated other than beneficial. Construction would create temporary disturbance to soil, but the areas of disturbed soil would be properly compacted to eliminate future settling and erosion issues. BMPs and permitting conditions required for funding would reduce the potential for future runoff and erosion to adjacent areas and the river. There would be long-term gain to area residents by having safe and reliable boat access during low water levels on the Yukon River and cumulative effects are anticipated to be minimal.

7.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

Several state and federal agencies, in addition to one tribe, were consulted throughout the draft EA process to gather valuable input and to meet regulatory requirements. Agencies contacted included the USACE, USFWS, NMFS, ADF&G, ADNR, SHPO, and Native Village of Eagle.

FEMA's draft EA is being released and a public notice is being posted in the community of Eagle and on FEMA's website at www.fema.gov/plan/ehp/envdocuments/index.shtm. The draft EA will be available for viewing for a 14-day public review and comment period. The shorter public review and comment period is warranted, as the project is well-known throughout the community. A copy of the public notice is included in Appendix A.

The initial public notice will also serve as the final public notice for this project. Unless significant substantive public comments are received, no further public involvement will be conducted for this draft EA. FEMA does not anticipate the need to prepare an Environmental Impact Statement. In the public notice distributed with the draft EA, all recipients were notified that after the public comment period ends, provided no substantive comments are received, the final EA and a Finding of No Significant Impact (FONSI) will be available at the FEMA website listed above.

8.0 PERMITTING, PROJECT CONDITIONS, AND MITIGATION MEASURES

The City of Eagle is required to obtain and comply with all local, state, and federal permits and authorizations prior to implementing the Proposed Action. Development at the Proposed Action project area shall comply with the scope of work in the FEMA project worksheet.

The following mitigation measures are required as project conditions for FEMA funding:

1. The City is required to obtain and comply with all local, state, and federal requirements, including any required permits and authorizations. Failure to obtain all appropriate permits and authorizations may jeopardize federal funding.

2. The City is responsible for selecting, implementing, monitoring, and maintaining appropriate BMPs to control erosion and sediment, reduce spills and pollution, and provide habitat protection. Erosion controls must be in place before any significant alteration of an area takes place. If fill is stored on site, the contractor is required to cover

and contain it appropriately. Areas of disturbed soil need to be properly compacted to eliminate settling and erosion issues. Access roads and work areas must use existing access ways whenever possible and minimize soil disturbance and compaction. BMPs such as silt fencing and reseeding using native species are required, as needed, to eliminate the potential for runoff and erosion to adjacent areas.

3. No construction material or debris shall be staged or disposed of in a wetland, even temporarily. Excess and unsuitable excavated material shall not be sidecast into or placed upslope of wetlands environments and shall be disposed of at an authorized disposal location.

4. If, during the course of work, items or sites which might be of archaeological or historical significance are discovered, the City shall stop construction in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the property. The City shall inform the Alaska Division of Homeland Security and Emergency Management, who will in turn inform FEMA and the State Historic Preservation Officer (SHPO). The City will not proceed with work until FEMA has completed consultation with the SHPO and determines appropriate measures have been taken to ensure the project is in compliance with the National Historic Preservation Act. If human remains are discovered, the City will also follow procedures for the discovery of human skeletal remains set out in Alaska Statutes 12.65.5 and 11.46.482(a)(6) related to the "intentional and unauthorized destruction or removal of any human remains or the intentional disturbance of a grave."

5. The City is required to directly coordinate with the Alaska Department of Fish and Game and the Alaska Department of Natural Resources, along with any borough planning departments, regarding the need for permits and authorizations. The City shall obtain and comply with all requirements prior to project implementation.

6. The City must comply with all USACE permit conditions and any project specific conditions. For more information on permit compliance and applicable conditions, contact Don Kuhle, USACE permit evaluator, at (907) 753-5567 or by email at don.p.kuhle@usace.army.mil. More information may also be found at the USACE regional website at www.poa.usace.army.mil/. Documentation of permit compliance should be kept in the project's records and may be required at closeout.

7. Should an active eagle nest be observed in the project area at any time during the project, the City is required to contact the USFWS Regional Office at (907) 786-3685 or by email at permitsR7MB@fws.gov to ensure compliance with the Bald and Golden Eagle Protection Act. Additional information is available at the USFWS eagle permit website at http://alaska.fws.gov/eaglepermit/index.htm.

8. Flexible wire loops should be installed along the river bank to allow boaters to tie off on the loops rather than tying off on the riparian vegetation and risk damaging the protection bank vegetation.
   :

9. If an active bird nest, eggs, or nestlings are encountered during project implementation, they must be left in place and protected until the young hatch and depart.

10. Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other laws and Executive Orders.

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APPENDIX A

Public Notice

PUBLIC NOTICE

The U.S. Department of Homeland Security's
Federal Emergency Management Agency (FEMA)
Draft Environmental Assessment
FEMA-1843-DR-AK
City of Eagle, Alaska

Eagle Boat Landing Replacement and Relocation

Notice is hereby given that FEMA plans to assist the City of Eagle by providing partial funding to construct a boat landing in Eagle, Alaska. The landing would replace the city's boat landing destroyed during flooding and ice jams that occurred on the Yukon River from April 28 through May 31, 2009. The event was declared a Presidential disaster on June 11, 2009 (FEMA-1843-DR-AK). Federal financial assistance would be provided pursuant to the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended (the Stafford Act).

FEMA has prepared a draft Environmental Assessment (EA) for the proposed project pursuant to the National Environmental Policy Act (NEPA) of 1969 and FEMA's implementing regulations. The draft EA will be finalized after agency and public review and input. The EA evaluates alternatives for compliance with applicable environmental laws, including: Executive Orders No. 11988 (Floodplain Management), No. 11990 (Protection of Wetlands), and No. 12898 (Environmental Justice). Alternative 1 is the No Action Alternative, which would not provide funding to restore the boat landing that was destroyed by the disaster. Alternative 2 would rebuild the boat landing to its pre-disaster condition at its original site. Alternative 3 would build a new boat landing with an improved boat ramp at an alternative site and is the Proposed Action Alternative.

This notice will constitute as the final notice as required by Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands. If no significant issues are identified during the comment period, FEMA will finalize the EA, issue a Finding of No Significant Impact (FONSI), and fund the project.

The draft EA is available for viewing at the school, library, and U.S. Post Office in the City of Eagle; at the New Village tribal office; and at www.fema.gov/plan/ehp/envdocuments/ea-region10.shtm for a 14-day public review and comment period. The shorter public review and comment period is warranted, as the project is well-known throughout the community. Please submit your written comments to Mark Eberlein, FEMA Region X Environmental Officer, no later than midnight on June 30. Comments can be submitted by:

1. By mail to: U.S. Department of Homeland Security
   FEMA Region X
   130 228th Street SW
   Bothell, WA 98021-9796
2. Fax at: (425) 487-4613
3 E-mail at: mark.eberlein@dhs.gov

After the public comment period ends, the final EA and FONSI will be available for viewing at: www.fema.gov/plan/ehp/envdocuments/archives_index.shtm.

APPENDIX B

SHPO Concurrence Letter

5/31/2011 3830-1R FEMA

U.S. Department of Homeland Security
Region X
130 228th Street, SW
Bothell, WA 98021-9796

FEMA

RECEIVED
MAY 23 2011
OHA

May 17, 2011

No Historic Properties Affected
Alaska State Historic Preservation Officer
Date: 5/31/2011
File No.: 3830-1R FEMA

Ms. Judith E. Bittner, State Historic Preservation Officer
Alaska Office of History and Archaeology
550 West 7th Avenue, Suite 1310
Anchorage, Alaska 99501-3565

Re: Section 106 consultation; Boating Landing Replacement and Relocation Project, Eagle, Alaska; FEMA-1865-DR-AK Project Worksheet No. 89

Dear Ms. Bittner:

The city of Eagle (City) has applied through the Alaska Division of Homeland Security and Emergency Management to the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) for funding assistance to replace the City's boat landing destroyed during flooding and ice jams on the Yukon River that occurred from April 28 through May 31, 2009. The event was declared a Presidential disaster on June 11, 2009, (FEMA-1843-DR-AK). Pursuant to 36 CFR 800.4(b), FEMA has taken steps necessary to identify historic properties or other cultural resources within the Area of Potential Effect (APE) for this project and is requesting your concurrence that no historic properties will be affected by this undertaking.

Location

The City would install a new boat landing at a site located approximately one mile southeast of the City. The site is approximately 906 yards (.51 miles) down river from the current landing to the west at the river bed edge on Elizabeth Street. The site is located in Township 1 South, Range 33 East, Section 32 of the Fairbanks meridian at Latitude 64.78149° North, Longitude -141.16161° West. The map in Figure 1 shows the location of the project.

www.fema.gov

Ms. Bittner
May 17, 2011
Page 2

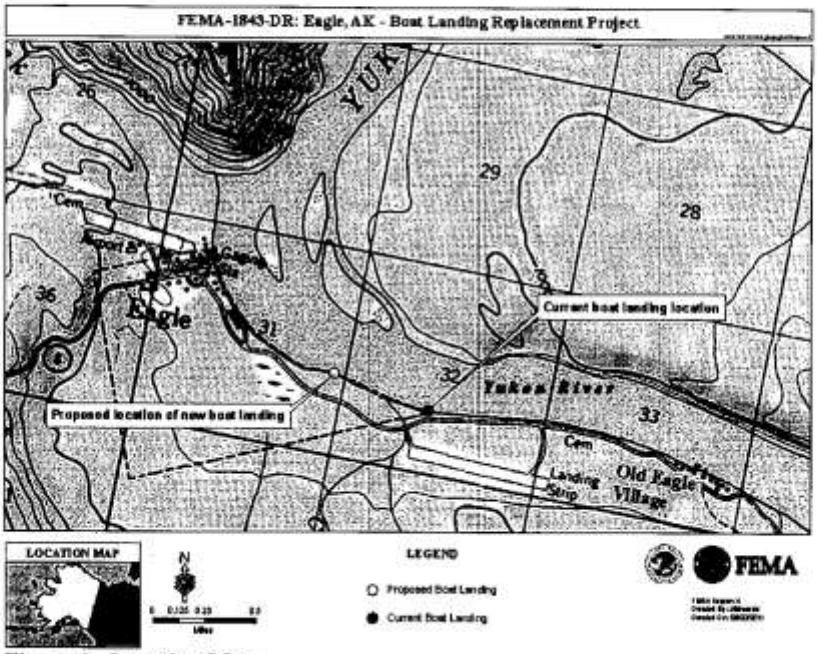

Figure 1. Location Map

Proposed Undertaking

The project would place two 40-foot-long by 7-foot-10-inch-wide by 30-inch-high precast concrete bridge spans (weighing approximately 40,000 pounds) end to end, providing an 80-foot-long by approximately 8-foot-wide hard surface boat ramp. A 24-inch by 30-inch trench for embedding the concrete bridge boat ramp would be excavated at an angle approximately 45 degrees downstream and partially into the river's edge at low water. The ramp would be placed approximately 120 feet below the ordinary high water of the river to provide river access during low water levels of the river shortly after spring breakup and during the fall until the river freezes up. The current river bank grade at the site is 10-12 degrees and the finished top surface of the ramp would be 6 inches above the grade. Setting the boat ramp at this grade would provide a stable, permanent landing that would not be affected by ice breakup and continued problems with silt deposition caused by runoff at the existing site approximately ½-mile upstream.

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Approximately 105 cubic yards of base course aggregate would be placed and spread along an approach currently used by the community for river access to connect to the boat ramp. The approach would be 120 feet long by 12 ~~inches~~ feet wide by 6-to-8 inches high and would include a 60-foot-diameter cul de sac at the end of the concrete ramp. No excavation would be required to construct the road and cul de sac. See Figure 2 for an aerial view of the project location. A sketch of the proposed site dimensions of the new landing site is included as an attachment. No further work is necessary or proposed at the original boat ramp location.

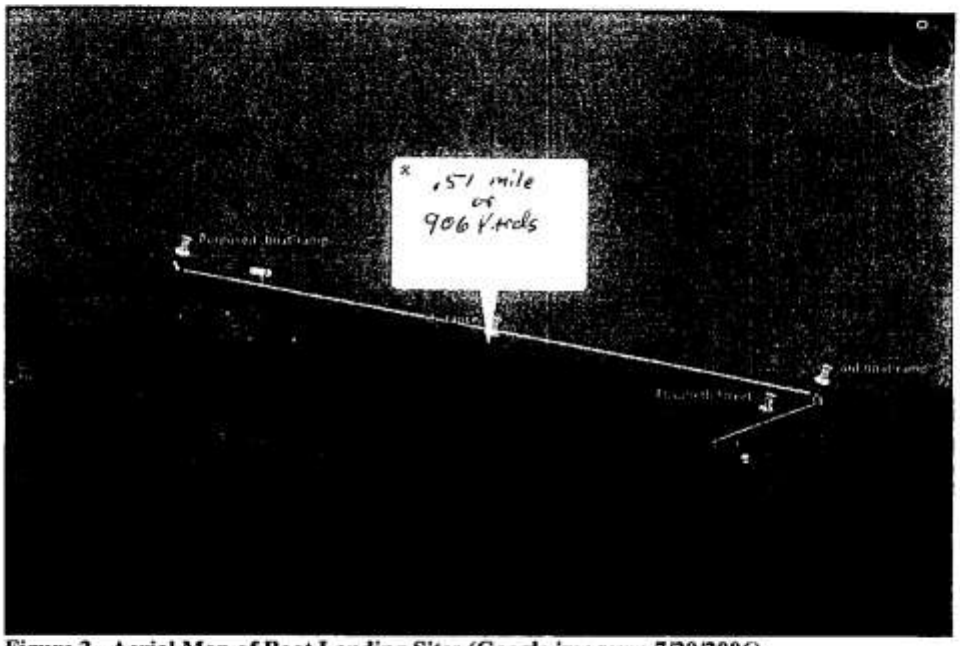

Figure 2. Aerial Map of Boat Landing Sites (Google imagery; 7/20/2006)

The shoreline and river bottom consist of heavy compacted cobble where the ramp will be placed, which provides an excellent stable base foundation. The materials from the minimal excavation required for the boat ramp placement would be suitable for use as a base surfacing for the apron and access road to the landing, thereby reducing the cost of bringing in material from other areas.

Shoreline at proposed site (10/5/10).

Proposed site at river's edge (10/5/2010).

The new location will resolve soft silt river approach deposition problems and provide winter usage during the river's low water level. The ramp would be under water during the high water summer months, during which an alternate summer boat ramp would be used. By maintaining the existing grade level at the new site, the site would not catch debris or trap ice.

Historic Property Identification and Evaluation

The general area where the community of Eagle is located has been the historical home to Han Kutchin (Gwich'in) Indians. Although there were originally four Han settlements on the Yukon River in the late 19th century, "Johnny's Village", or "Katshikotin", is the only remaining permanent settlement and is now known as the Native Village of Eagle (Village). The Village is a traditional Athabascan community belonging to the Han and is a federally-recognized Tribe. Accordingly, FEMA will be consulting with the Village to determine if there are any historic properties in the APE that are of religious or cultural interest.

A supply and trading station for miners working the upper Yukon and its tributaries was established around 1874 where the City is located and the City was founded in 1897. By 1898 the population had grown to over 1,700. A U.S. Army camp was established in 1899, and Fort Egbert was completed in 1900. Eagle became the first incorporated city in the Interior in January 1901. By 1910, Fairbanks and Nome gold prospects had lured away many and the City's population declined to 178. Fort Egbert was abandoned in 1911. The current population of the City is approximately 86 and is primarily non-Native. The Village has approximately 67 residents (2010 Census).

The Han village at the Eagle townsite relocated to a site three miles east of Eagle after non-native miners began settling in the area. In recent years, the Village had been in the process of relocating due to flood hazards, erosion, and poor water quality at the Old Village. In 2001, the Eagle Village Council selected a site and obtained land to start a New Village located inland and approximately 10 miles southwest of the City. When the Old Village was destroyed during the

flooding and ice jams that occurred in May 2009, the remaining residents at the site moved inland to the New Village.

The APE for this project is a strip of land about 180 feet long by 15 feet wide and includes an apron area in the middle, measuring 60 feet in diameter, to provide a cul de sac connecting the access road to the low-water site, as generally depicted on the attached site sketch. The site is 5,400 square feet, or just over $1/10^{th}$ of an acre.

FEMA database files of the Alaska Heritage Resources Survey (AHRS) disclosed no known archaeological, historical, or palaeontological sites within the APE. However, one listed site is located less than ½-mile distant to the east. This is Site EAG-139 Niibeeo Zhoo (Nibaww Zhoh), located on the south bank of the Yukon River to the west of the Old Village. The site represents a Han Athabascan village that was occupied between 1880 and 1890 AD and is located within the boundaries of Eagle Historic District National Historic Landmark (EAG-001). Based on oral history and archaeological data from the site, it appears that the Han families there focused on hunting large and small game, especially caribou and salmon. The site includes seven or eight house pits, each about 12 feet by 15 feet. Two house pits were excavated in the summer of 1976. The present condition is good, with vegetation cover of predominately horsetail and willow. The current undertaking will have no effect on this site.

Determination of Effects

Based on the absence of reported cultural resources within the APE of the undertaking, and given the heavily eroded (and eroding) environment along the river in this vicinity, FEMA has concluded that the likelihood of the presence of any unreported resources in the APE is very low. In addition, given the extent of ground excavation will occur 120 feet below the ordinary high water mark of the river, ground disturbances are likely to encounter primarily disturbed soils and the project would have little potential to encounter archaeological resources. The following inadvertent discovery clause will be required as a condition of project approval and FEMA believes this further mitigates the potential for adverse effects to historic properties.

> If, during the course of work, items or sites which might be of archaeological or historical significance are discovered, the City shall stop construction in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the property. The City shall inform the Alaska Division of Homeland Security and Emergency Management, who will in turn inform FEMA and the State Historic Preservation Officer (SHPO). The City will not proceed with work until FEMA has completed consultation with the SHPO and determines appropriate measures have been taken to ensure the project is in compliance with the National Historic Preservation Act. If human remains are discovered, the City will also follow procedures for the discovery of human skeletal remains set out in Alaska Statutes 12.65.5 and 11.46.482(a)(6) related to the "intentional

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and unauthorized destruction or removal of any human remains or the intentional disturbance of a grave."

Accordingly, and subject to any later unanticipated discoveries, FEMA has made a determination of "no historic properties affected" for this undertaking, as outlined in 36 CFR §800.4(d)(1). We respectfully request your concurrence or comment to these findings. Should you have any questions or need further assistance, please contact Barbara Gimlin, FEMA Environmental Specialist, at (541) 404-0355 or barbara.gimlin@dhs.gov, or me at (425) 487-4735 or mark.eberlein@dhs.gov.

Sincerely,

Barry Hall for

Mark Eberlein
Regional Environmental Officer

Enclosure

MG:bb